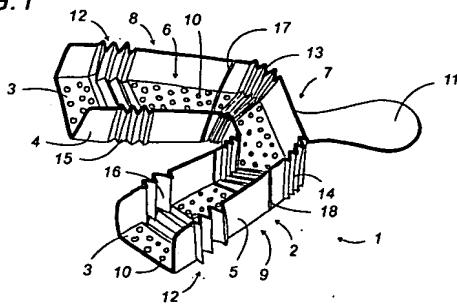


REMARKS

Claims 29-48 are rejected under 35 U.S.C. § 112, first and sixth paragraph, as being indefinite for the reasons noted in the official action. The rejected claims are accordingly rewritten as new claims 49-68 by the above new claims, and the presently pending claims are now believed to particularly point out and distinctly claim the subject matter regarded as the invention, thereby overcoming all of the raised § 112, first and sixth paragraph, rejections.

Claims 29, 30, 35, 40 and 41 (now claims 49, 50, 55, 60 and 61) are rejected, under 35 U.S.C. § 102(b), as being anticipated by Starr '976. The Applicant acknowledges and respectfully traverses the raised anticipatory rejection in view of the following remarks.

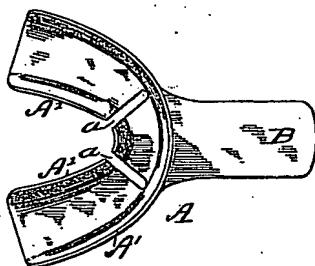
As the Examiner is aware in order to properly support an anticipation rejection under 35 U.S.C. § 102(b), the cited reference must disclose each and every feature and/or element of the presently claimed invention. The Applicant points out that as shown, for example by FIG. 1 (reproduced below), in the Applicant's impression tray the integrated deformable zones 13, 14, 15 and 16 are formed in the manner of a bellows. These bellows, are in fact, contiguous across the entire width of the gutter as defined by the bottom wall 3, interior side wall 4 and external side wall 5 as shown in applicants Fig. 1 reproduced below.

FIG. 1

This feature of the present invention is distinctly different than the dental impression cup as disclosed in Starr '976. Comparing the dental impression cup of Starr '976, it is readily discernible that in order to provide some relative malleability of the metal dental impression cup,

Starr's invention provides cut outs a of material extending only partially into the gutter area of the dental impression cup. While such removal of material may arguably make portions of the dental impression cup of Starr '976 malleable, or flexible, the cut outs a particularly removes material and weakens the structural integrity of the dental impression cup at the same time. More importantly, these material cut outs a for example a as seen in Fig. 5 of Starr shown below, extend only partially across the bottom wall of the impression cup.

Fig. 5.



In this regard, besides the 112 issues discussed above, claim 49 specifically includes the feature of "...a multidirectional extension portion (12, 112, 212) extending contiguously across the entire bottom wall, interior side wall and external side wall of the gutter to facilitate both angular adjustment and a change of length of the gutter". It is important also to note that such a feature would not even be possible with the structure and teachings of Starr '976 because as is readily apparent, the removal of material across each of the corresponding elements in Starr '976 would completely sever the device into several pieces rendering the device useless. Because at least this feature or element as recited in independent claim 49 is not disclosed, taught or suggested or even possible in any manner by Starr '976, the Applicant respectfully requests withdrawal of the anticipation rejection.

Claims 32 and 33 (now claims 52 and 53) are rejected, under 35 U.S.C. § 103(a), as being unpatentable over Starr '976. The Applicant acknowledges and respectfully traverses the raised obviousness rejection in view of the following remarks.

As the Examiner is aware, in order to support an obviousness rejection under 35 U.S.C. § 103(a), there must be some disclosure, teaching or at least a suggestion within the prior art reference that would lead one of ordinary skill in the art to achieve the presently claimed invention. When rejecting claims under 35 USC § 103, the Examiner bears the initial burden of presenting a *prima facie* case of obviousness. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed.Cir. 1992). Only if that burden is met, does the burden of coming forward with evidence or argument shift to the Applicant. Id. Further, "[a] *prima facie* case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art." In re Bell, 991 F.2d 781, 782, 26 USPQ2d 1529, 1531 (Fed.Cir. 1993) (quoting In re Rinehart, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA) 1976)). If the Examiner fails to establish a *prima facie* case, the rejection is improper and will be overturned. In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed.Cir. 1988).

The Examiner argues that it would be an obvious manner of design choice to make the impression tray of Starr '976 with four (4) means of multidirectional extension, since each modification would have involved a mere duplication of parts and that the duplication of parts is generally recognized as being within the level of ordinary skill in the art. Besides the lack of any actual teaching in Starr '976 to any further width ways slots extending across the width of the gutter, or to any particular structural placement other than as shown at the shoulders on Starr's device, further slots placed in Starr's device would still not accomplish the aspect of the present invention of lengthening, or extending the length of the Applicant's gutter. Further removal of material and creation of such cut outs in Starr '976 would only permit further

bending, i.e., a change of radius of the gutter, not elongation, or extension of the gutter as recited in the present invention where claim 49 recites ". . . a multidirectional extension portion. . . to facilitate both angular adjustment and a change of length of the gutter". It is an important aspect of the present invention, and very different from that of Starr '976, that the bellows portions permit not only multidirectional flex, but also elongation of the gutter to accommodate larger, and longer molar sections of a patient's teeth.

In any event, these claims are directly and indirectly dependent upon claim 49 which is believed allowable in view of the above amendments and remarks, and thus these claims are also believed allowable.

Claims 31, 36 and 37 (now 51, 56 and 57) are rejected, under 35 U.S.C. § 103, as being unpatentable over Starr '876 in view of Kesling '151. The Applicant acknowledges and respectfully traverses the raised obviousness rejection in view of the following remarks.

In order to support a combination of references, each of the references must provide some disclosure, teaching or suggestion which would lead one of ordinary skill in the art to combine the references to achieve the presently claimed invention. Arguably, the dental impression cup of Starr '976 and the orthodontic band of Kesling '151 relate to the field of dentistry. Beyond this, however, the Applicant can find none of the required disclosure, teaching or suggestion which would lead one of skill in the art to combine these references.

Observing Kesling '151, this reference teaches an adjustable orthodontic band and, in fact, a "seamless" orthodontic band described in the specification at column 1, lines 14-18, as "The term 'seamless' includes a band having no visible seam as well as a band where two edges of material are brought together and secured such as by welding or the like". The orthodontic band is fabricated so as to surround and engage either permanently, or for a substantial period of time, a patient's tooth. This is an entirely different structure and function

than that of Starr '976 which relates, much like the present invention, to obtaining an impression of a patient's teeth.

The disclosure of Kesling '151 describes that the band is provided with a series of corrugations as described in column 3, lines 47-50 ". . .in the event that the tooth has a larger size, the band may be increased in size as needed by expansion of the corrugations so that it will fit teeth of various sizes." However, a thorough review of the specification fails to reveal any disclosure of such corrugations with respect to a dental impression cup for obtaining a dental impression.

Furthermore, the structure and function of the orthodontic band in Kesling '151 is completely contrary to that of a dental impression cup of Starr '976 or the present invention. Kesling is a "seamless" band or closed ring having its end joined to one another to encircle a tooth. A dental impression cup by its very nature is an open ended device having its ends substantially spaced apart, and separated from one another so as to accommodate the rear molars of a dental patient. Starr '976 relates solely to a dental impression cup and has no disclosure, teaching or suggestion which would lead one of ordinary skill in the art to look to an orthodontic band, much less the orthodontic band and corrugation as in Kesling '151. These actually disparate references have nothing in common other than being used in dentistry and therefore it is the Applicant's position that there is no disclosure, teaching or suggestion in either reference which would lead one of ordinary skill in the art to a combination therefor.

It is, therefore, the Applicant's contention, that the only reference where a dental impression cup includes or teaches the use of corrugations or bellows is the Applicant's presently claimed invention. Therefore, the combination of the Starr '976 and Kesling '151 which have no relation either functionally or structurally outside of the dental field is a matter of hindsight in view of the Applicant's disclosure. The use of hindsight is improper as noted by case law. A precise statement as to the impropriety of a hindsight rejection, under 35 U.S.C.

§103 is found in the opinion of the CCPA rendered in the decision of *In re Linnert*, 309 F.2d 498, 503; 135 USPQ 307, 311 (1962):

Viewed in the light of the appellants' specification, the solution to the problem. . .may seem obvious over the combined teaching of the references. Such a hindsight analysis, however is not allowed by 35 U.S.C. §103 which requires a comparison of the prior art and the invention as a whole at the time the invention was made.

The CCPA went on to state:

It is easy now to attribute to this prior art the knowledge which was first made available by appellants and then to assume that it would have been obvious to one having the ordinary skill in the art to make these suggested reconstructions. While such a reconstruction of the art may be an alluring way to rationalize a rejection of claims, it is not the type of rejection which the statute authorizes. 35 U.S.C. §103 is very specific in requiring that a rejection on the grounds the invention 'would have been obvious' must be based on a comparison between the prior art and the subject matter as a whole at the time the invention was made.

Even if the two could be combined, and the Applicant adamantly refutes such a possibility, a combination would merely replace the respective slots a in Starr '976 with the corrugations of Kesling '151. Thus, the corrugations would be formed only through the interior and bottom walls of such a combination, and/or at the intersection *between* the external wall and the bottom wall and the combination would thus still fail to teach the "...a multidirectional extension portion (12, 112, 212) extending contiguously across the entire bottom wall, interior side wall and external side wall of the gutter to facilitate both angular adjustment and a change of length of the gutter" as currently recited in claim 49.

The Applicant also notes that the feature of claim 36, now 56, is not merely a matter of design choice. Contrary to the Examiner's indication that "Applicant has not disclosed that shaping the entire length of the gutter as a single bellow provides an advantage, is used for a particular purpose, or solves a stated problem". The Applicant draws the Examiner's attention to at least specification paragraph [101]

This alternative has the advantage of providing a single type of surface.

There is no alteration of smooth and folded surfaces, which considerably facilitates its manufacture. Moreover, it offers unequaled possibilities of adjustment, while remaining very simple for fast and practical use.

With regards to previous claim 37, now claim 57, it is completely contrary to the Kesling '151 reference that the "seamless" band could be separated or divided as in the present application. Such a splitting or separation along the bellows of the orthodontic band would equate to complete failure of the band and thus if anything, Kesling teaches specifically away from such a feature "...wherein the impression tray has sections (250), intending to be divided upon use" as now recited in claim 37. Again, these claims are also dependent upon claim 49 which is believed allowable, and therefore these claims are believed allowable as well.

Claims 34, 38 and 39 are rejected, under 35 U.S.C. § 103(a), as being unpatentable over Starr '976 in view of Kesling '151 and further in view of Wright '768. Claims 42-48 are rejected, under 35 U.S.C. § 103(a), as being unpatentable over Starr '976 in view of Andreiko '826. As these claims now rewritten as new claims 54, 58, 59 and 62-68 are directly or indirectly dependent on claim 49 which is believed to be allowable in view of the above remarks and specifically claimed features not disclosed, taught or suggested by the prior art, the Applicant believes these dependent claims to be allowable as well, and thus no further discussion is provided.

The Applicant has also added a new independent claim 70 which includes the further feature of

...an interior edge of the gutter formed on the interior side wall, and an external edge of the gutter formed on the external side wall; and. . .a contiguous bellows extending from said interior edge completely across the interior wall, the bottom wall and the external wall to the external edge of the gutter to define a multidirectional extension portion (12, 112, 212) which permits both angular alignment and lengthwise extension of the gutter.

This recitation is added to further clarify and define the aspect of the present invention where the bellow extend width-wise completely across the gutter. As this feature is not disclosed, taught or suggested in any manner by any of the references either alone or in combination, the Applicant believes new claim 70 to be allowable as well. If any further amendment to this application is believed necessary to advance prosecution and place this case in allowable form, the Examiner is courteously solicited to contact the undersigned representative of the Applicant to discuss the same.

In view of the above amendments and remarks, it is respectfully submitted that all of the raised anticipation and obviousness rejections should be withdrawn at this time. If the Examiner disagrees with the Applicant's view concerning the withdrawal of the outstanding rejections or applicability of the Starr '976 and Kesling '151, references, the Applicant respectfully requests the Examiner to indicate the specific passage or passages, or the drawing or drawings, which contain the necessary teaching, suggestion and/or disclosure required by case law. As such teaching, suggestion and/or disclosure is not present in the applied references, the raised rejection should be withdrawn at this time. Alternatively, if the Examiner is relying on his/her expertise in this field, the Applicant respectfully requests the Examiner to enter an affidavit substantiating the Examiner's position so that suitable contradictory evidence can be entered in this case by the Applicant.

10/511,180

In view of the foregoing, it is respectfully submitted that the raised rejection(s) should be withdrawn and this application is now placed in a condition for allowance. Action to that end, in the form of an early Notice of Allowance, is courteously solicited by the Applicant at this time.

The Applicant respectfully requests that any outstanding objection(s) or requirement(s), as to the form of this application, be held in abeyance until allowable subject matter is indicated for this case.

In the event that there are any fee deficiencies or additional fees are payable, please charge the same or credit any overpayment to our Deposit Account (Account No. 04-0213).

Respectfully submitted,



Scott A. Daniels, Reg. No. 42,462
Customer No. 020210
Davis & Bujold, P.L.L.C.
Fourth Floor
500 North Commercial Street
Manchester NH 03101-1151
Telephone 603-624-9220
Facsimile 603-624-9229
E-mail: patent@davisandbujold.com